

Identifying engagement in HIV care among people living with HIV enrolled in the Canadian HIV Observational Cohort (CANOC) from 2013-2016.



Ioana A. Nicolau¹, Mostafa Shokoohi¹, Abigail Kroch², Niloufar Aran^{3,4}, Erin Ding³, Nic Bacani³, Nisha Andany^{5,17}, Tony Antoniou⁶, Ann N. Burchell^{7,6,8}, Curtis Cooper^{9,10}, Deborah Kelly¹¹, Marina Klein^{12,13}, Julio Montaner^{3,14}, Stephan Sanche¹⁵, Réjean Thomas¹⁶, Sharon Walmsley¹⁷, Alex Wong¹⁵, Robert Hogg^{3,4}, Mona Loutfy^{18,19,8} on behalf of the CANOC Collaboration

1. Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, 2. Ontario HIV Treatment Network, Toronto, Ontario, 3. BC Centre for Excellence in HIV/AIDS, Vancouver, British Columbia, 4. Simon Fraser University, Burnaby, British Columbia, 5 -.Division of Infectious Diseases, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Ontario, 6. Unity Health Toronto, St Michael's Hospital, Toronto, Ontario, 7. Department of Family and Community Medicine, University of Toronto, Toronto, Ontario, 8. University of Toronto, Toronto, Ontario, 9. Ottawa Hospital, Ottawa, Ontario, 10. University of Ottawa, Ottawa, Ontario, 11. School of Pharmacy, Memorial University, St John's, Newfoundland and Labrador, 12 .McGill University Health Centre, Montreal, Quebec, 13. CIHR Canadian HIV Trials Network, Vancouver, British Columbia, 14. University of British Columbia, Vancouver, British Columbia, 15. College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, 16. Clinique médicale l'Actuel, Montreal, Quebec, 17. Department of Medicine, University of Toronto, Toronto, ON, Canada, 18. Maple Leaf Medical Clinic, Toronto, Canada, 19. Women's College Research Institute, Toronto, Canada

Background

- ❖ The HIV care cascade is the standard for public health departments, ministries and clinicians to monitor success of HIV care programs across jurisdictions.
- ❖ Ensuring that people living with HIV (PLWH) are linked to and retained in care, and on combination antiretroviral therapy (cART) is crucial to achieving viral suppression and optimal health outcomes.
- ❖ We sought to characterize and determine correlates of engagement in HIV care among participants of a large Canadian clinical cohort from 2013 to 2016.

Methods

- ❖ The Canadian HIV Observational Cohort (CANOC) includes individuals living in Canada, ≥18 years, who are cART naïve as of Jan. 1, 2000, with at least one viral load (VL) and CD4 count within 12 months of initiating cART.
- ❖ The base inclusion criterion for this study was any CANOC participant that could contribute data to the study period Jan. 1, 2013-Dec. 31, 2016, with a naïve cART start date between Jan. 1, 2000-Dec. 31, 2016. Individuals with missing gender information were excluded.
- ❖ We estimated annual proportions meeting the engagement in care indicators: 1) in care (1 VL per year); 2) on cART (at least one prescription per year); and 3) viral suppression (<200 copies/mL).
- ❖ We assessed correlates for each indicator using generalized estimating equation with a log-link and binomial distribution to calculate risk ratios (RR) with 95% confidence intervals (CI).

Investigators

CANOC Principal Investigators: Robert S. Hogg, Zabrina Brumme, Ann Burchell, Curtis Cooper, Mark Hull, Deborah Kelly, Marina B. Klein, Abigail Kroch, Mona Loutfy, Nimâ Machouf, Julio Montaner, Kate Salters, Stephen Sanche, Réjean Thomas, Sharon Walmsley, and Alexander Wong

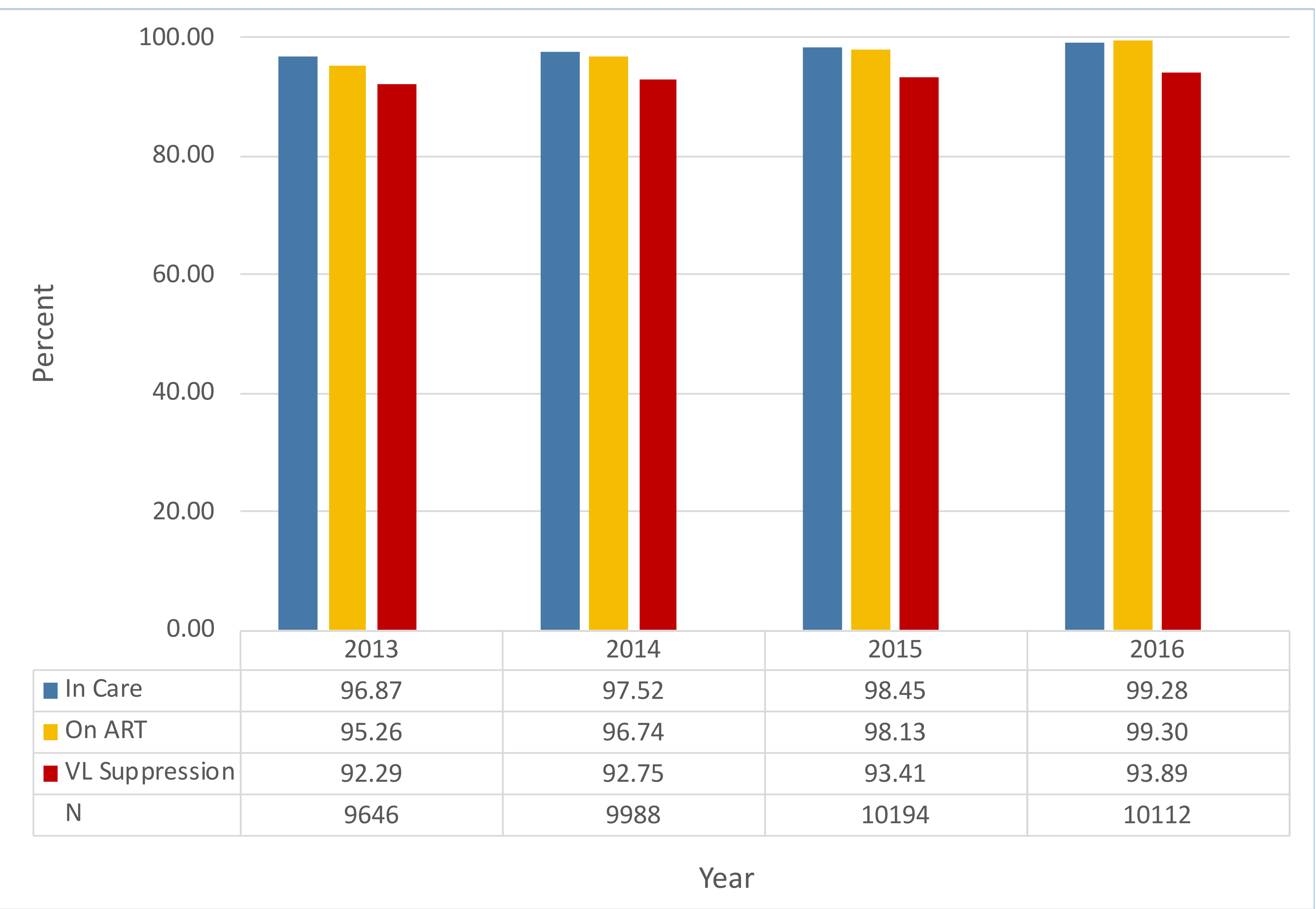


Figure 1. HIV care cascade nested estimates among CANOC participants, 2013-2016

Table 1. Models assessing correlates of in care, on cART and viral load suppression among CANOC participants, 2013-2016

Variable	Model 1	Model 2	Model 3
	In care	On cART	VL suppression
	aRR (95% CI)	aRR (95%CI)	aRR (95%CI)
<i>Province of the CANOC site</i>			
British Columbia	Ref	Ref	Ref
Saskatchewan	0.2 (0.15-0.26)*	0.89 (0.69-1.15)	0.51 (0.42-0.62)*
Ontario	0.77 (0.58-1.02)	0.78 (0.63-0.96)	1.23 (1.06-1.42)
Quebec	0.78 (0.56-1.08)	0.38 (0.21-0.71)	1.42 (1.20-1.68)
Newfoundland	0.44 (0.20-0.97)*	1.59 (1.34-1.9)	0.87 (0.52-1.45)*
<i>Age at first ARV initiation (years)</i>			
< 30	Ref	Ref	Ref
30 - 60	1.20 (0.95-1.51)	2.57 (1.42-4.64)	1.84 (1.63-2.07)
> 60	1.16 (0.64-2.09)	0.84 (0.67-1.04)	2.32 (1.62-3.32)
<i>Gender</i>			
Male	Ref	Ref	Ref
Female	0.90 (0.71-1.15)	0.38 (0.15-0.96)	0.81 (0.70-0.93)
Transgender	0.90 (0.29-2.80)	1.51 (1.04-2.18)	1.32 (0.57-3.05)
<i>HIV risk categorized hierarchically</i>			
MSM and not PWID	Ref	Ref	Ref
MSM and PWID	0.92 (0.53-1.63)	0.66 (0.52-0.86)	0.48 (0.38-0.62)
PWID	0.53 (0.39-0.73)*	0.93 (0.71-1.22)*	0.38 (0.32-0.45)*
Heterosexual	0.70 (0.51-0.96)*	0.90 (0.60-1.34)*	0.62 (0.52-0.74)*
Other	0.55 (0.37-0.81)*	1.07 (0.82-1.40)*	0.62 (0.47-0.83)*
Unknown/Missing	1.07 (0.75-1.52)	Exp(>60)	0.99 (0.83-1.19)

Abbreviations: aRR, adjusted risk ratio; CI, confidence interval; VL, viral load; cART, combination antiretroviral therapy; MSM, men sex with men; PWID, persons who inject drugs; Ref, reference category. Note: * P<0.05

Results

- ❖ Of the 10,112 eligible participants (83% men), 44% resided in British Columbia (BC), 29% in Ontario, 21% in Quebec, 4% in Saskatchewan and 1% in Newfoundland. The median age at first cART initiation was 39 (Q1-Q3, 32-47); 56% were Caucasian; 50% men sex with men (MSM); 74% and 68% not coinfectd with hepatitis C nor B virus (HCV, HBV), respectively; 82% no AIDS defining illnesses ever. Median baseline CD4 count and VL were 260 cells/mL (150-400) and 4.8 log10 copies/mL (4.3-5.0), respectively. Median year of first cART initiation was 2010 (2003-2012).
- ❖ From 2013 to 2016, there was an increase in the proportions of participants in care (96.87%-99.28%), on cART (95.26%-99.30%) and with suppressed viral load (92.29%-93.89%) (Fig 1).
- ❖ We saw similar increases in engagement in care trends over time when looking by province, gender, age, HCV, and HIV risk factors.
- ❖ The annual proportion of participants with viral suppression was < 90% for females, age <30, people who inject drugs (PWID), HCV, non-MSM, and Saskatchewan.
- ❖ We found lower probability of care engagement for PLWH in Saskatchewan vs. BC, and for PWID and heterosexual HIV risk category compared to MSM only. In addition, females had a lower probability of being on cART and suppressed VL than males (Table 1).

Conclusion

We observed high proportions of HIV care engagement which increased over time and identified factors that correlated with lower odds of care engagement. These findings suggest the need for targeted care engagement programs and initiatives.

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